

## REMARKS

In response to the Examiner's advice, please be advised that the applicant has secured the services of the undersigned registered patent attorney.

The specification has been revised to conform to the required arrangement. A number of paragraphs have been revised to correct the English. Following Russian practice, the applicant's original specification omitted a number of articles. Where it appeared necessary for clarification, articles have been inserted or, in some cases, changed.

A new ABSTRACT is included.

### Rejections Under 35 U.S.C. 102 and 103

Claims 1 and 2 have been cancelled herein. It is believed that new claims 3-14 are in statutory form. The original claims have been rejected as anticipated by or as obvious under 35 U.S.C. 102 (a and b) or under 35 U.S.C. 103(a) over the following patents:

<i>Kameta et al. '038 B1</i>	This patent relates to an overlay method and hardened product therefrom is clearly unrelated to concrete including aggregate formulation for a subbase or lower layer of a composite pavement.
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Serial No. 10/775,496

*Clavaud et al. '234*

This patent relates to an ultra-high performance composite concrete having good mechanical properties as well as impact, shock and projectile protection properties. It includes a hydraulic binder, aggregates and an admixture of metal fibers. Applicant's formulation for an aggregate mix for normal concrete is quite unrelated.

*Masuda et al. '704*

This patent relates to a paving asphalt concrete composition involving oil impregnated, vulcanized rubber. It is obviously unrelated to applicant's claimed formulation of aggregate for normal concrete.

*Lees et al (RE 30,047 or U.S. Patent 4,105,458)*

This patent relates to a special road surface. Applicant is concerned with a subbase or lower layer so this patent is not applicable.

*Sawyer '675*

This patent relates to a specialized type of Portland cement (early high strength) and is different from normal cement as explained in *Mark's Standard Handbook for Mechanical Engineers* discussed below.

Serial No. 10/775,496

*Chase '590*

This is a patent covering a design for an aircraft runway including holes filled with dielectric material. This is clearly unrelated to applicant's formulation of aggregate for normal concrete.

*Lang '956*

This patent covers a detailed structure of highway pavement, including, inter alia, surface layers, support layers, an intermediate (sand) layer, and special contraction joints between the surface layers. It is not concerned with formulation of aggregate mix for a subbase layer and is not believed pertinent to applicant's claims.

*Foulger '276,*

This patent covers a construction of roads, aircraft runways, and the like having a base concrete layer and a surface slab over the base with layers of polyethylene between the base layer and the surface slab. This is quite unrelated to applicant's formulation of aggregate for use in a subbase layer.

Serial No. 10/775,496

*Freyssinet '846*

This patent was not listed on the form PTO-892 accompanying the Office Action so applicant does not have a complete patent number.

Since the original claims have been cancelled and the newly presented claims 3-14 are substantially different, it is believed that the above references are clearly not applicable.

It would probably be useful to clarify somewhat the nature of the invention described and claimed herein. This application is directed to a specific formulation of aggregate used to make the concrete. The aggregate used is, or may be, the most expensive of the ingredients used to make concrete. As a result of spending a working lifetime in concrete formulation and testing, the applicant has a substantial knowledge of both the formulations used and the economic factors in the choice of aggregates.

To begin, the concrete described and discussed is "normal concrete" or concrete made with "normal" cement. As set forth in Mark's Standard Handbook for Mechanical Engineers, Ninth Ed., Normal Portland Cement, type I is used for purposes for which another type having special properties is not required. This is not to say that all "normal concrete" is the same, but it does not require special properties such as resistance to sulfite attacks, low heat generation, early high strength, air entraining, hardening under water etc.

It is believed that the nature of applicant's invention will become clear from consideration of the newly presented claims. The present application is concerned with

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a specific mix of sizes of limestone grains which, combined with normal cement, gives rise to unexpectedly favorable values of properties such as compressive strength, modulus of rupture and flexural strength.

A great amount of limestone waste, defined as that finer than 9.5 mm., continues to accumulate in quarries around the country. It has not been used much because it is generally believed to require excessive amounts of cement. Since it is considered "waste", it is very cheap. The applicant teaches a way to utilize this waste to make cheap concrete, which is also very strong, without a substantial penalty in the amount of cement required.

#### Obviousness-Type Double Patenting


Claims 1 and 2 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Again, these claims have been cancelled. The problem presented by a series of apparently similar applications is quite clear to the applicant's attorney and an effort has and will be made to avoid a double patenting problem. The claims presently presented are not believed to be duplicated in any other of applicant's pending applications.

It is believed that the claims are now in condition for allowance and favorable action is requested.

Enclosed are a newly executed Power of Attorney and a Petition for Extension of Time (Small Entity) for one month and \$60 check.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert C. Smith", written over a horizontal line.

Robert C. Smith, Reg. No. 17,500  
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RCS:mm

Enclosures: Power of Attorney  
Petition for Extension of Time & \$60 Check  
New Abstract

I:\Patent\Sapozhnikov\05.AMENDMENT A